



SEQUENCE LISTING

<110> Blissard, Gary W.

Granados, Robert R.

Lin, Guangyun

RECEIVED

APR 12 2002

TECH CENTER 1600/2900

<120> STABLE CELL LINES RESISTANT TO APOPTOSIS AND NUTRIENT
STRESS AND METHODS OF MAKING SAME

<130> BTI44

RECEIVED

APR 11 2002

OFFICE OF PETITIONS

<140> US 09/518,763

<141> 2000-03-03

<160> 11

<170> PatentIn Ver. 3.1

<210> 1

<211> 900

<212> DNA

<213> Autographa californica nucleopolyhedrovirus

<220>

<221> CDS

<222> (1)..(897)

<300>

<301> Ayres, Martin D.

Howard, Stephen C.

Kuzio, John

Lopez-Ferber, Miguel

Possee, Robert D.

<302> The Complete DNA Sequence of Autographa californica

Nuclear Polyhedrosis Virus

<303> Virology

<304> 202

<305> 2

<306> 586-605

<307> 1994

<308> L22858

<309> 1999-03-08

<313> 116492 TO 117391

<400> 1

atg tgt gta att ttt ccg gta gaa atc gac gtg tcc cag acg att att 48

Met Cys Val Ile Phe Pro Val Glu Ile Asp Val Ser Gln Thr Ile Ile

1 5 10 15

cga gat tgt cag gtg gac aaa caa acc aga gag ttg gtg tac att aac 96

Arg Asp Cys Gln Val Asp Lys Gln Thr Arg Glu Leu Val Tyr Ile Asn

20 25 30

aag att atg aac acg caa ttg aca aaa ccc gtt ctc atg atg ttt aac 144

Lys Ile Met Asn Thr Gln Leu Thr Lys Pro Val Leu Met Met Phe Asn

35 40 45

att tcg ggt cct ata cga agc gtt acg cgc aag aac aac aat ttg cgc 192

Ile Ser Gly Pro Ile Arg Ser Val Thr Arg Lys Asn Asn Asn Leu Arg

50

55

60

gac aga ata aaa tca aaa gtc gat gaa caa ttt gat caa cta gaa cgc 240

Asp Arg Ile Lys Ser Lys Val Asp Glu Gln Phe Asp Gln Leu Glu Arg

65

70

75

80

gat tac agc gat caa atg gat gga ttc cac gat agc atc aag tat ttt 288

Asp Tyr Ser Asp Gln Met Asp Gly Phe His Asp Ser Ile Lys Tyr Phe

85

90

95

aaa gat gaa cac tat tcg gta agt tgc caa aat ggc agc gtg ttg aaa 336

Lys Asp Glu His Tyr Ser Val Ser Cys Gln Asn Gly Ser Val Leu Lys

100

105

110

agc aag ttt gct aaa att tta aag agt cat gat tat acc gat aaa aag 384

Ser Lys Phe Ala Lys Ile Leu Lys Ser His Asp Tyr Thr Asp Lys Lys

115

120

125

tct att gaa gct tac gag aaa tac tgt ttg ccc aaa ttg gtc gac gaa 432

Ser Ile Glu Ala Tyr Glu Lys Tyr Cys Leu Pro Lys Leu Val Asp Glu

130

135

140

cgc aac gac tac tac gtg gcg gta tgc gtg ttg aag ccg gga ttt gag 480

Arg Asn Asp Tyr Tyr Val Ala Val Cys Val Leu Lys Pro Gly Phe Glu

145

150

155

160

aac ggc agc aac caa gtg cta tct ttc gag tac aac ccg att ggt aac 528

Asn Gly Ser Asn Gln Val Leu Ser Phe Glu Tyr Asn Pro Ile Gly Asn

165

170

175

aaa gtt att gtg ccg ttt gct cac gaa att aac gac acg gga ctt tac 576

Lys Val Ile Val Pro Phe Ala His Glu Ile Asn Asp Thr Gly Leu Tyr

180

185

190

gag tac gac gtc gta gct tac gtg gac agt gtg cag ttt gat ggc gaa 624

Glu Tyr Asp Val Val Ala Tyr Val Asp Ser Val Gln Phe Asp Gly Glu

195

200

205

caa ttt gaa gag ttt gtg cag agt tta ata ttg ccg tcg tcg ttc aaa 672

Gln Phe Glu Glu Phe Val Gln Ser Leu Ile Leu Pro Ser Ser Phe Lys

210

215

220

aat tcg gaa aag gtt tta tat tac aac gaa gcg tcg aaa aac aaa agc 720

Asn Ser Glu Lys Val Leu Tyr Tyr Asn Glu Ala Ser Lys Asn Lys Ser

225

230

235

240

atg atc tac aag gct tta gag ttt act aca gaa tcg agc tgg ggc aaa 768

Met Ile Tyr Lys Ala Leu Glu Phe Thr Thr Glu Ser Ser Trp Gly Lys

245

250

255

tcc gaa aag tat aat tgg aaa att ttt tgt aac ggt ttt att tat gat 816

Ser Glu Lys Tyr Asn Trp Lys Ile Phe Cys Asn Gly Phe Ile Tyr Asp

260

265

270

aaa aaa tca aaa gtg ttg tat gtt aaa ttg cac aat gta act agt gca 864

Lys Lys Ser Lys Val Leu Tyr Val Lys Leu His Asn Val Thr Ser Ala

275

280

285

ctc aac aaa aat gta ata tta aac aca att aaa taa

900

Leu Asn Lys Asn Val Ile Leu Asn Thr Ile Lys

290

295

<210> 2

<211> 299

<212> PRT

<213> Autographa californica nucleopolyhedrovirus

<400> 2

Met Cys Val Ile Phe Pro Val Glu Ile Asp Val Ser Gln Thr Ile Ile

1

5

10

15

Arg Asp Cys Gln Val Asp Lys Gln Thr Arg Glu Leu Val Tyr Ile Asn

20

25

30

Lys Ile Met Asn Thr Gln Leu Thr Lys Pro Val Leu Met Met Phe Asn

35

40

45

Ile Ser Gly Pro Ile Arg Ser Val Thr Arg Lys Asn Asn Asn Leu Arg

50

55

60

Asp Arg Ile Lys Ser Lys Val Asp Glu Gln Phe Asp Gln Leu Glu Arg

65

70

75

80

Asp Tyr Ser Asp Gln Met Asp Gly Phe His Asp Ser Ile Lys Tyr Phe

85

90

95

Lys Asp Glu His Tyr Ser Val Ser Cys Gln Asn Gly Ser Val Leu Lys

100

105

110

Ser Lys Phe Ala Lys Ile Leu Lys Ser His Asp Tyr Thr Asp Lys Lys

115

120

125

Ser Ile Glu Ala Tyr Glu Lys Tyr Cys Leu Pro Lys Leu Val Asp Glu

130

135

140

Arg Asn Asp Tyr Tyr Val Ala Val Cys Val Leu Lys Pro Gly Phe Glu

145

150

155

160

Asn Gly Ser Asn Gln Val Leu Ser Phe Glu Tyr Asn Pro Ile Gly Asn

165

170

175

Lys Val Ile Val Pro Phe Ala His Glu Ile Asn Asp Thr Gly Leu Tyr

180

185

190

Glu Tyr Asp Val Val Ala Tyr Val Asp Ser Val Gln Phe Asp Gly Glu

195

200

205

Gln Phe Glu Glu Phe Val Gln Ser Leu Ile Leu Pro Ser Ser Phe Lys

210

215

220

Asn Ser Glu Lys Val Leu Tyr Tyr Asn Glu Ala Ser Lys Asn Lys Ser

225

230

235

240

Met Ile Tyr Lys Ala Leu Glu Phe Thr Thr Glu Ser Ser Trp Gly Lys

245

250

255

Ser Glu Lys Tyr Asn Trp Lys Ile Phe Cys Asn Gly Phe Ile Tyr Asp

260

265

270

Lys Lys Ser Lys Val Leu Tyr Val Lys Leu His Asn Val Thr Ser Ala

275

280

285

Leu Asn Lys Asn Val Ile Leu Asn Thr Ile Lys

290

295

<210> 3

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide primer

<400> 3

ctagaagttg gaaagatgcc agcggctggt cgtaatag

38

<210> 4

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

oligonucleotide primer

<400> 4

ctagctatta cgaccagccg ctggcatctt tccaactt

38

<210> 5

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: p35upEcoRI

primer

<400> 5

cagaattcat gtgtgtaatt tttcggtag

30

<210> 6

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: p35lowXbaI-NO
stop primer

<400> 6

ttttgctcta gatttaattg tgtttaatat tac

33

<210> 7

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
p35lowXbaI-Stop primer

<400> 7

aatgctctag attatttaat tgtgtttaat attac

35

<210> 8

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

p166-p35 linker DNA

<400> 8

ttaaacacaa ttaaa

15

<210> 9

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

p166-p35 linker polypeptide

<400> 9

Leu Asn Thr Ile Lys

1

5

<210> 10

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

p166-p35-AcV5 linker DNA

<400> 10

ttaaacacaa ttaaattctag aagttggaaa gatgccagcg gctggtcgta atag 54

<210> 11

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

p166-p35-AcV5 linker polypeptide

<400> 11

Leu Asn Thr Ile Lys Ser Arg Ser Trp Lys Asp Ala Ser Gly Trp Ser

1 5 10 15